

KIC 006443199

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
006443199-01	OBS	No	532.418719	264.843936	367.9	26.268	7.1	7.3	0.93	5706	1.84	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006443199-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

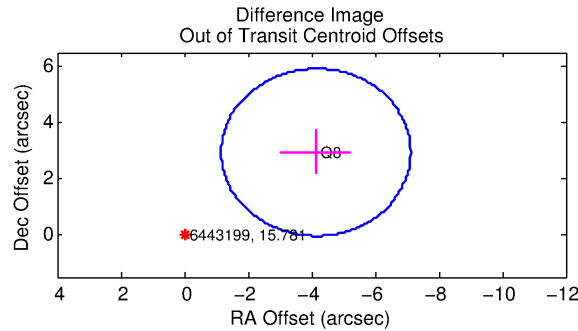
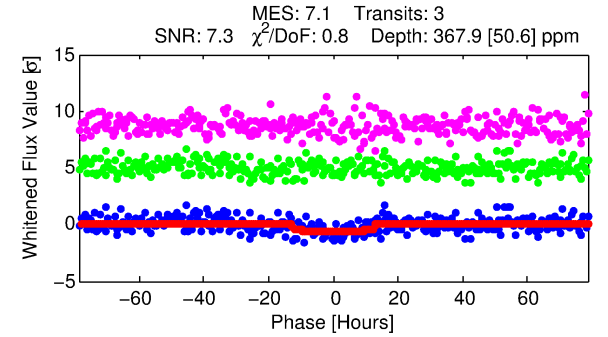
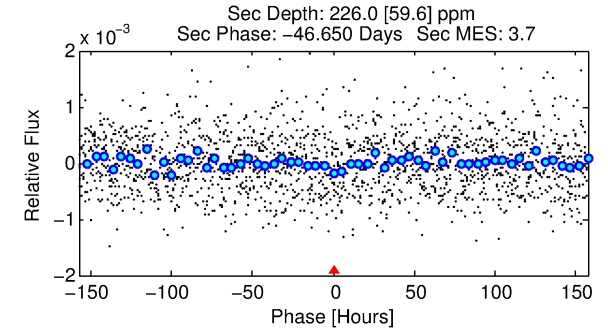
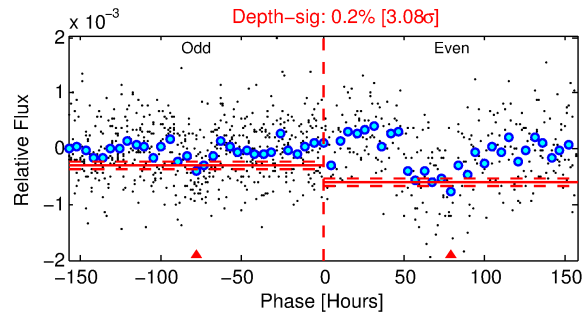
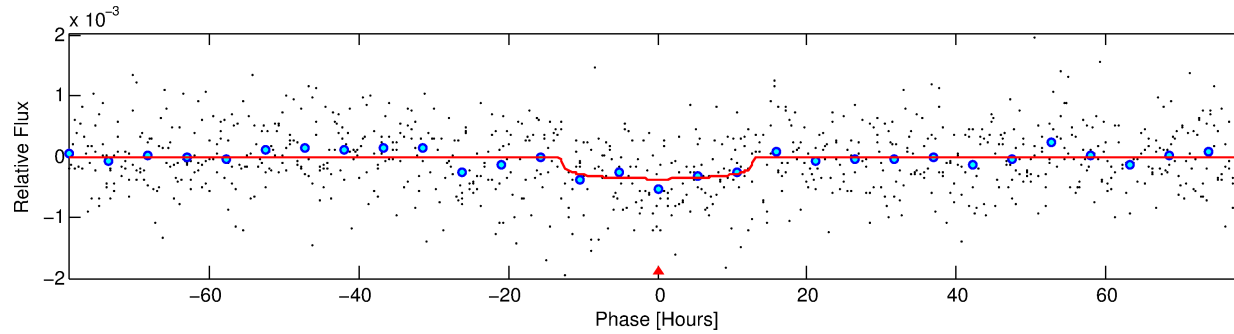
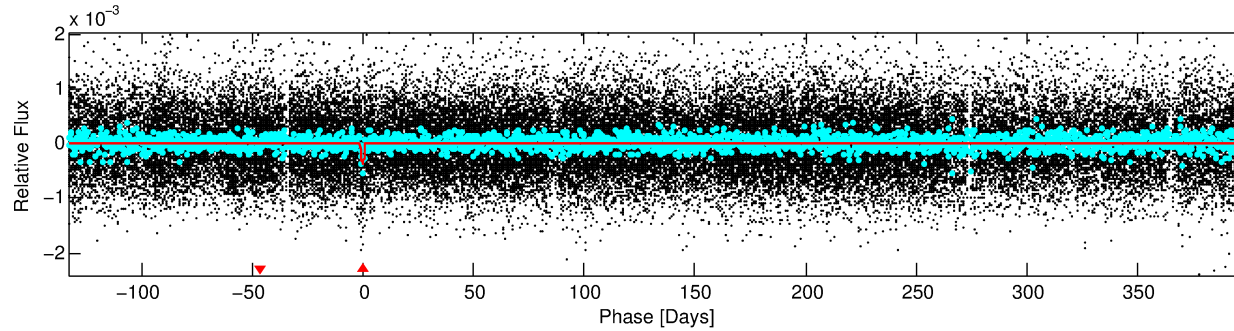
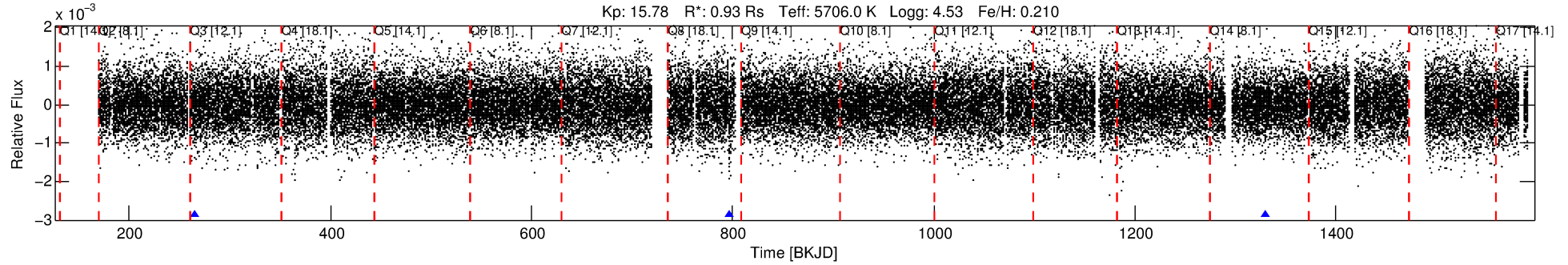
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006443199-01

No Significant Match Found

DV One-Page Summary

KIC: 6443199 Candidate: 1 of 1 Period: 532.419 d



DV Fit Results:

Period = 532.41872 [0.02988] d
Epoch = 264.8439 [0.0405] BKJD
Rp/R* = 0.0182 [0.0135]
a/R* = 128.51 [397.53]
b = 0.59 [3.44]
Seff = 0.48 [0.19]
Teq = 212 [21] K
Rp = 1.84 [1.48] Re
a = 1.3060 [0.3391] AU
Ag = 62649.51 [97677.62] [0.64 σ]
Teffp = 5185 [1966] K [2.53 σ]

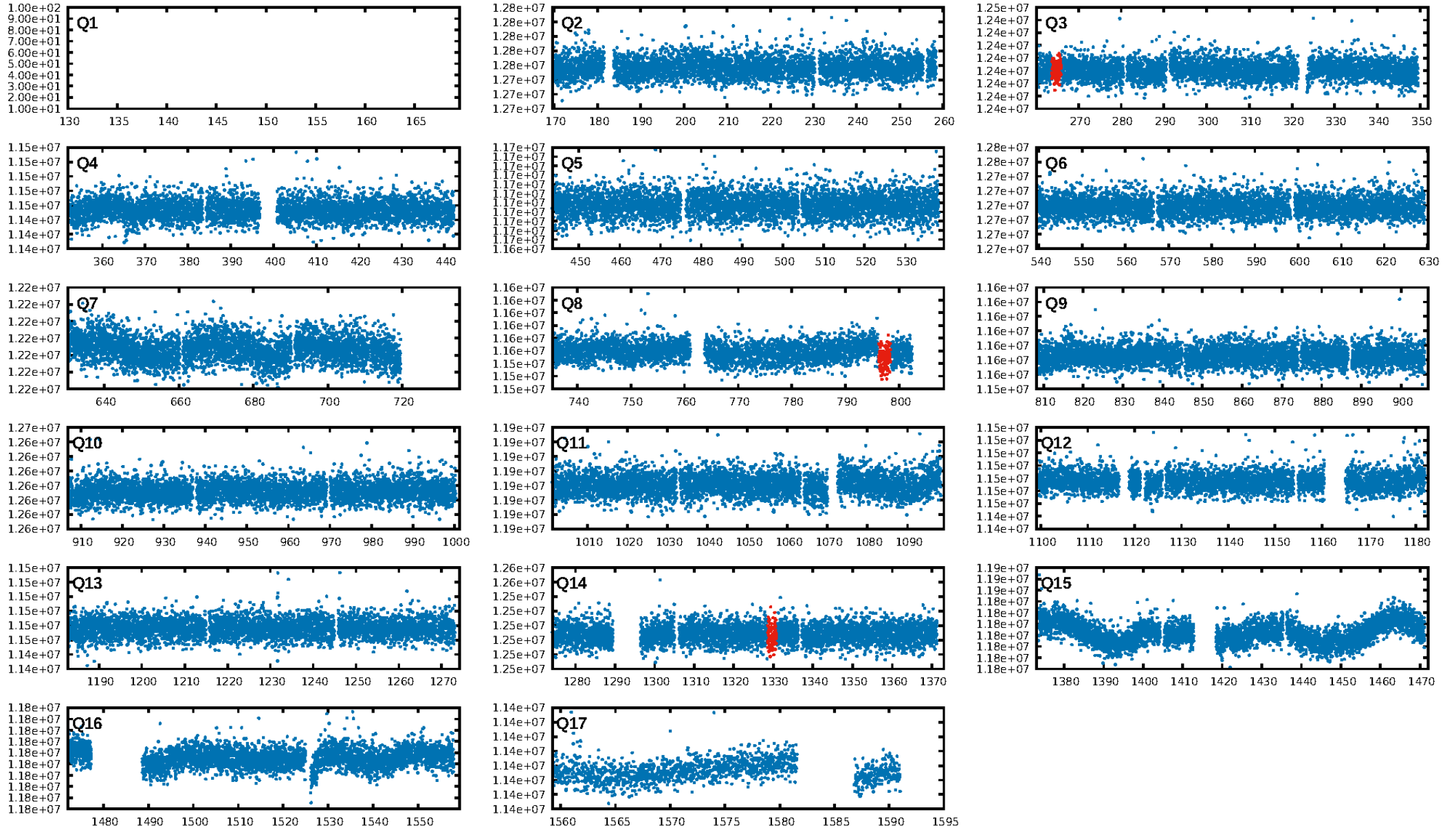
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.81e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.2764
Centroid-sig: 10.2%
Centroid-so: 2.003 arcsec [1.17 σ]
OotOffset-rm: 5.078 arcsec [5.12 σ]
KicOffset-rm: 5.208 arcsec [5.18 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

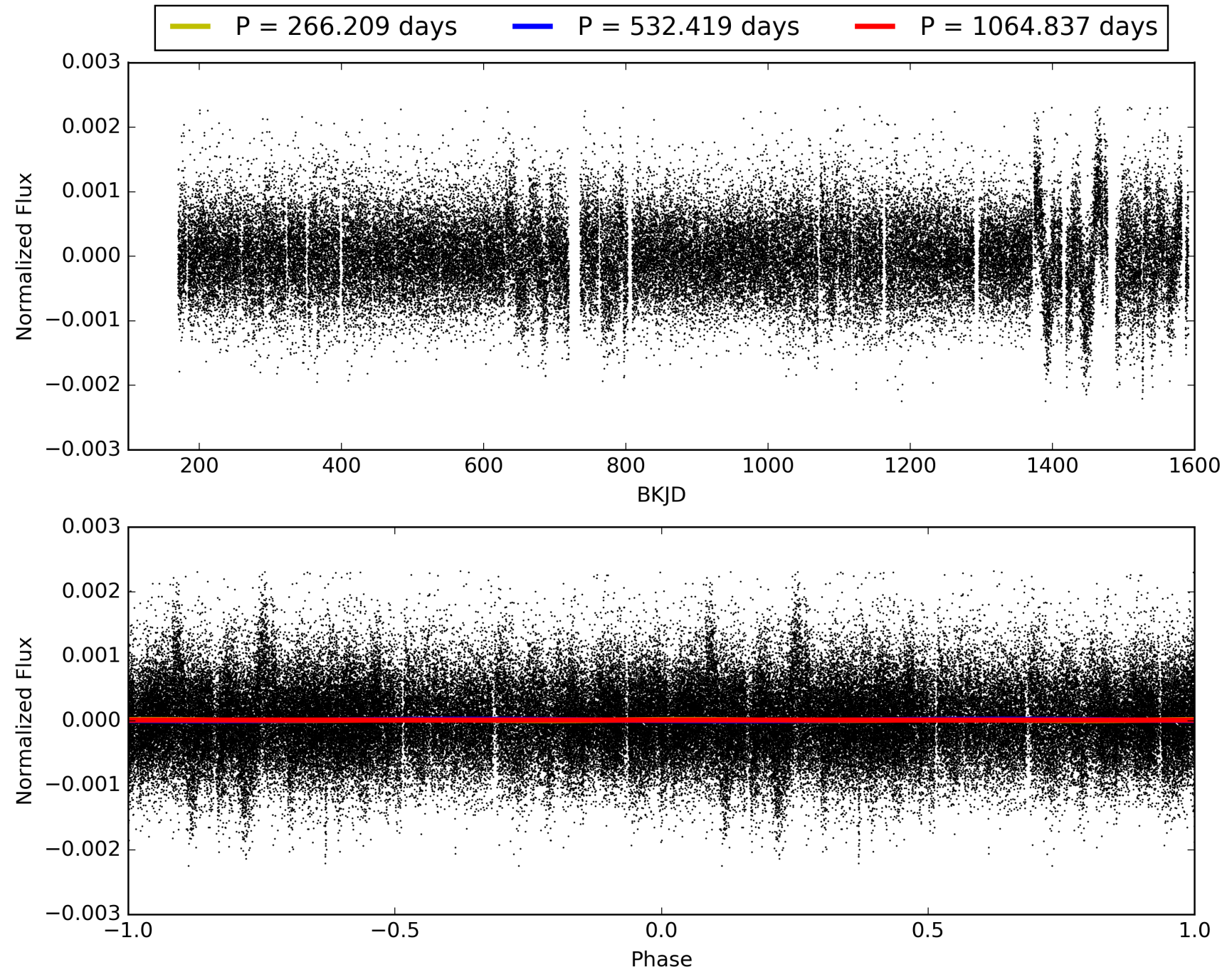
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:14:37 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006443199-01, PDC Light Curves

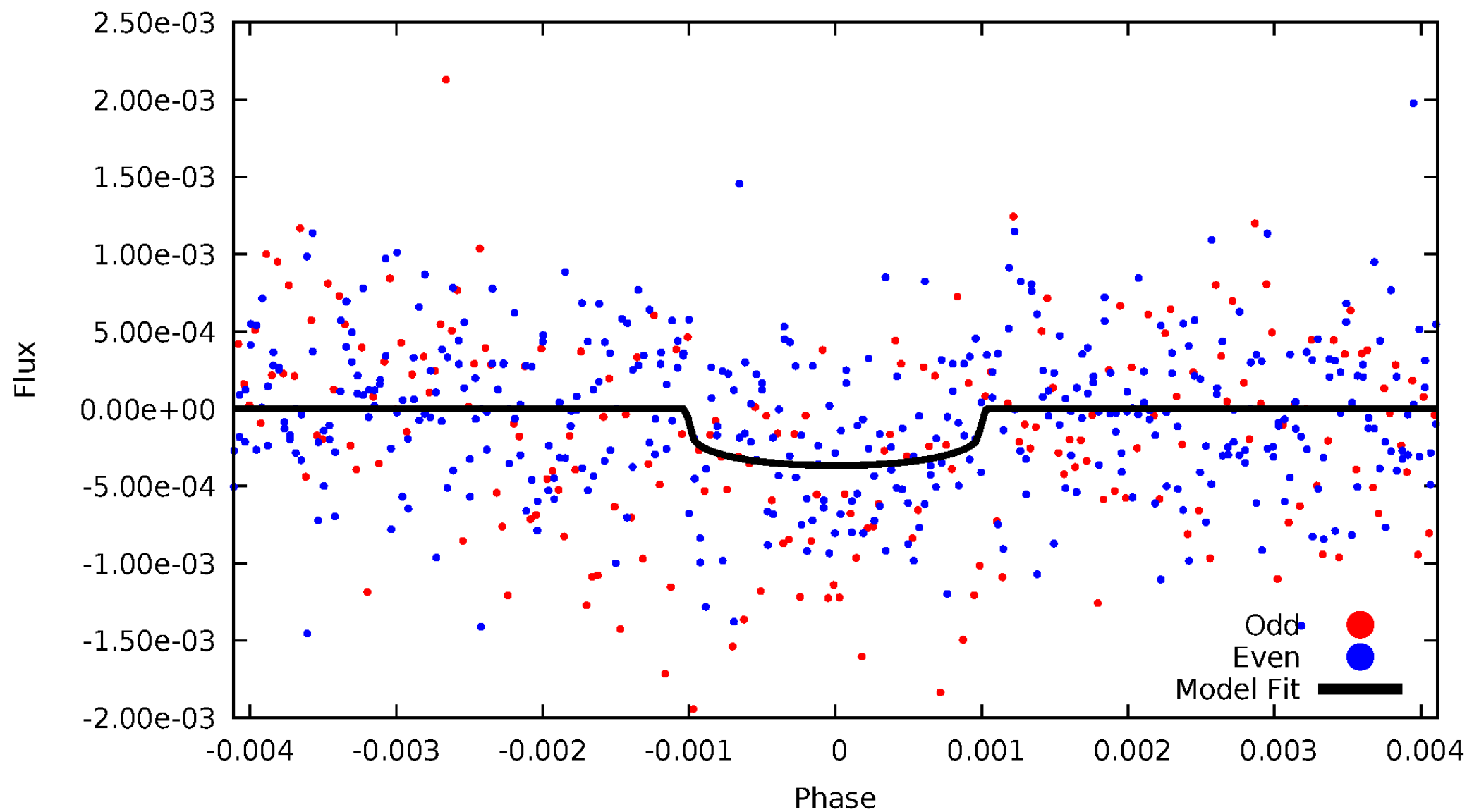


TCE 006443199-01



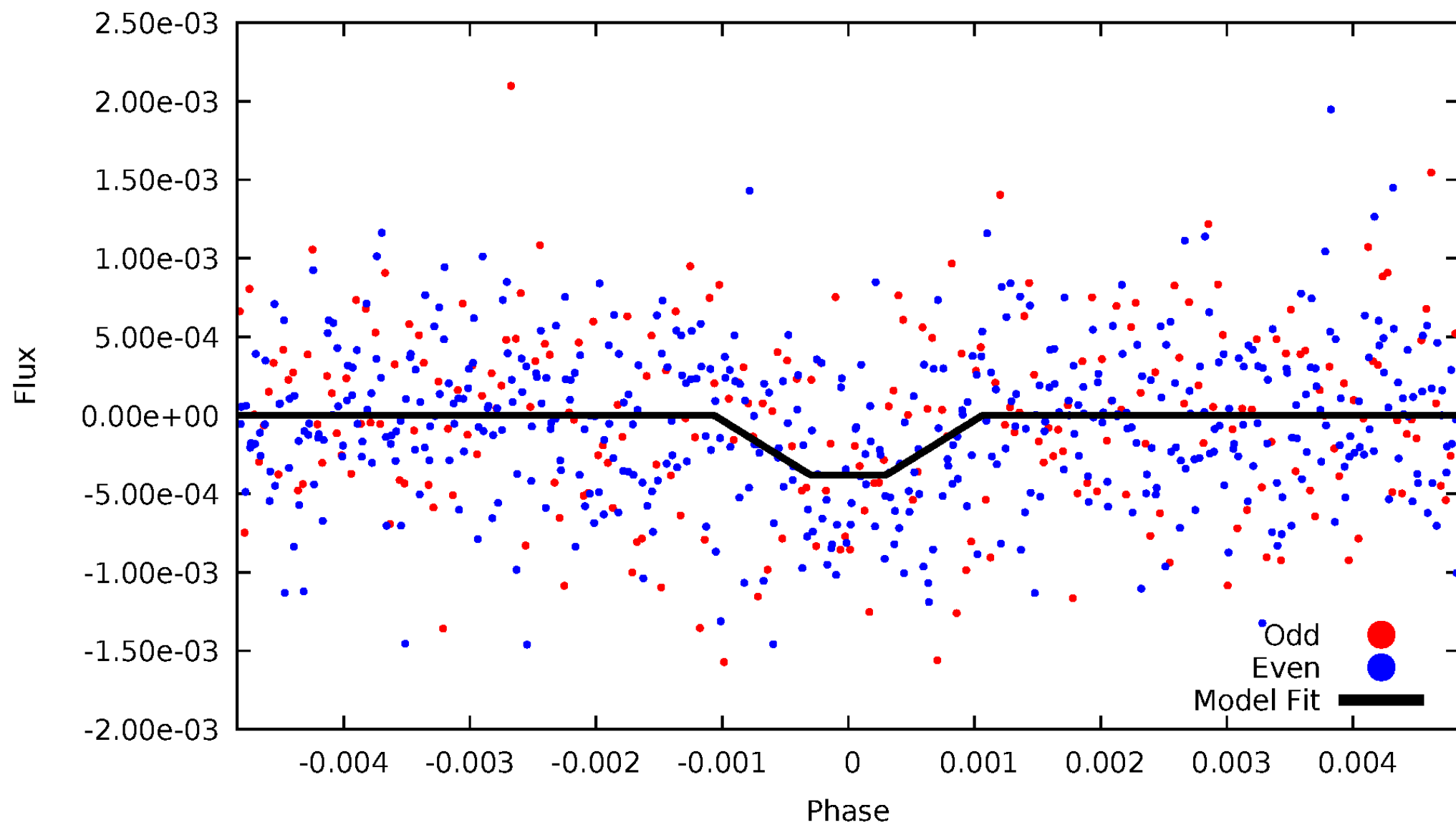
DV Odd/Even

TCE 006443199-01

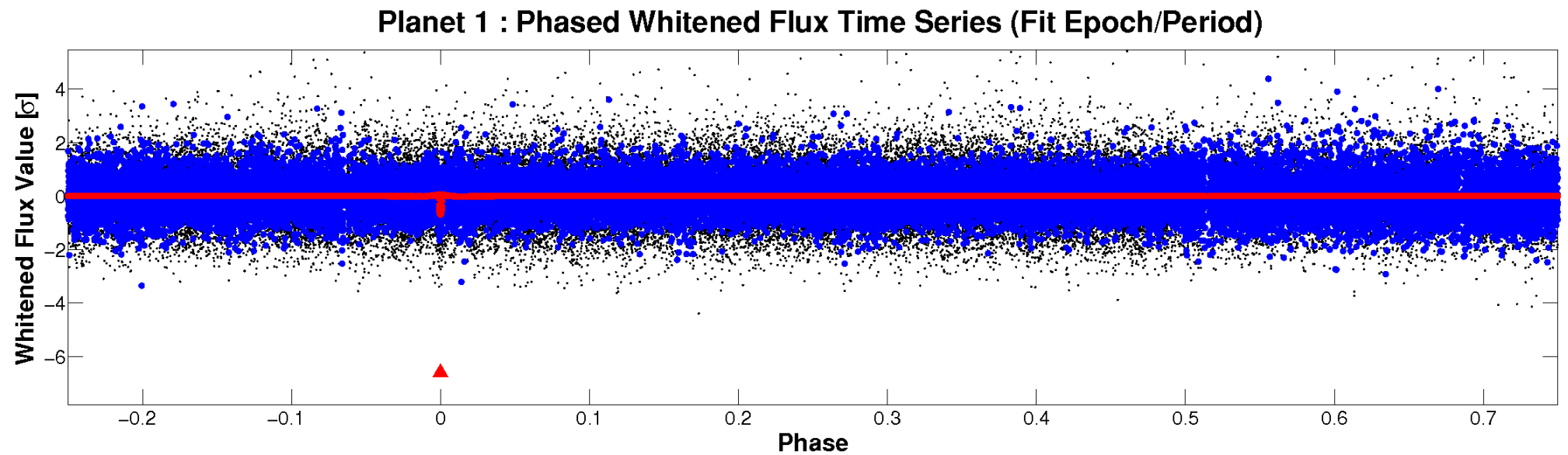
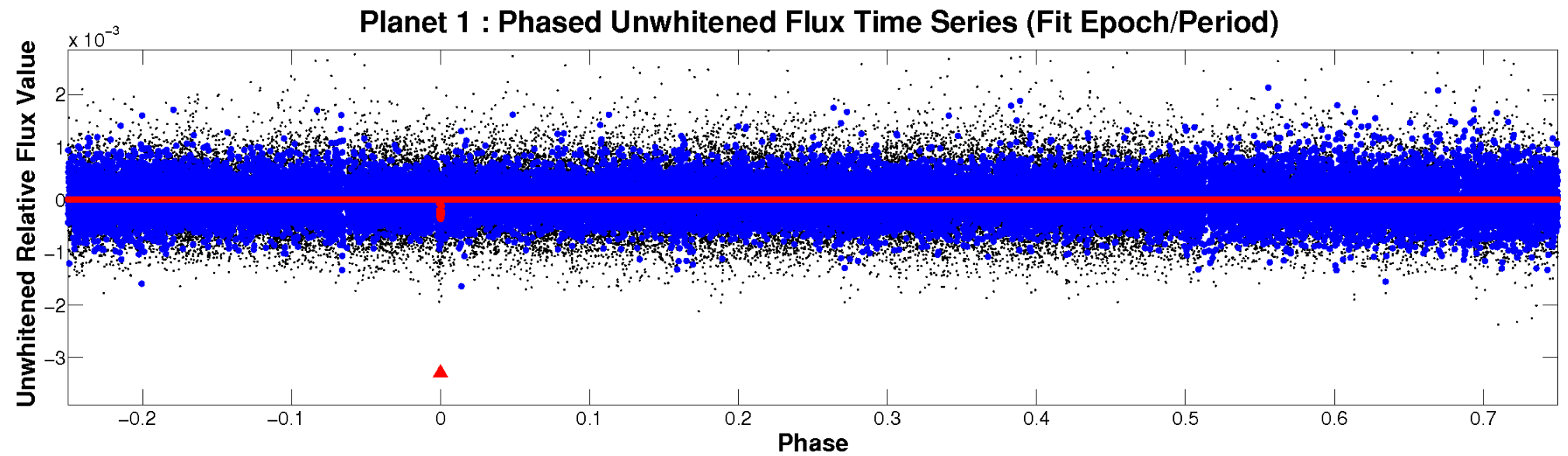


ALT Odd/Even

TCE 006443199-01

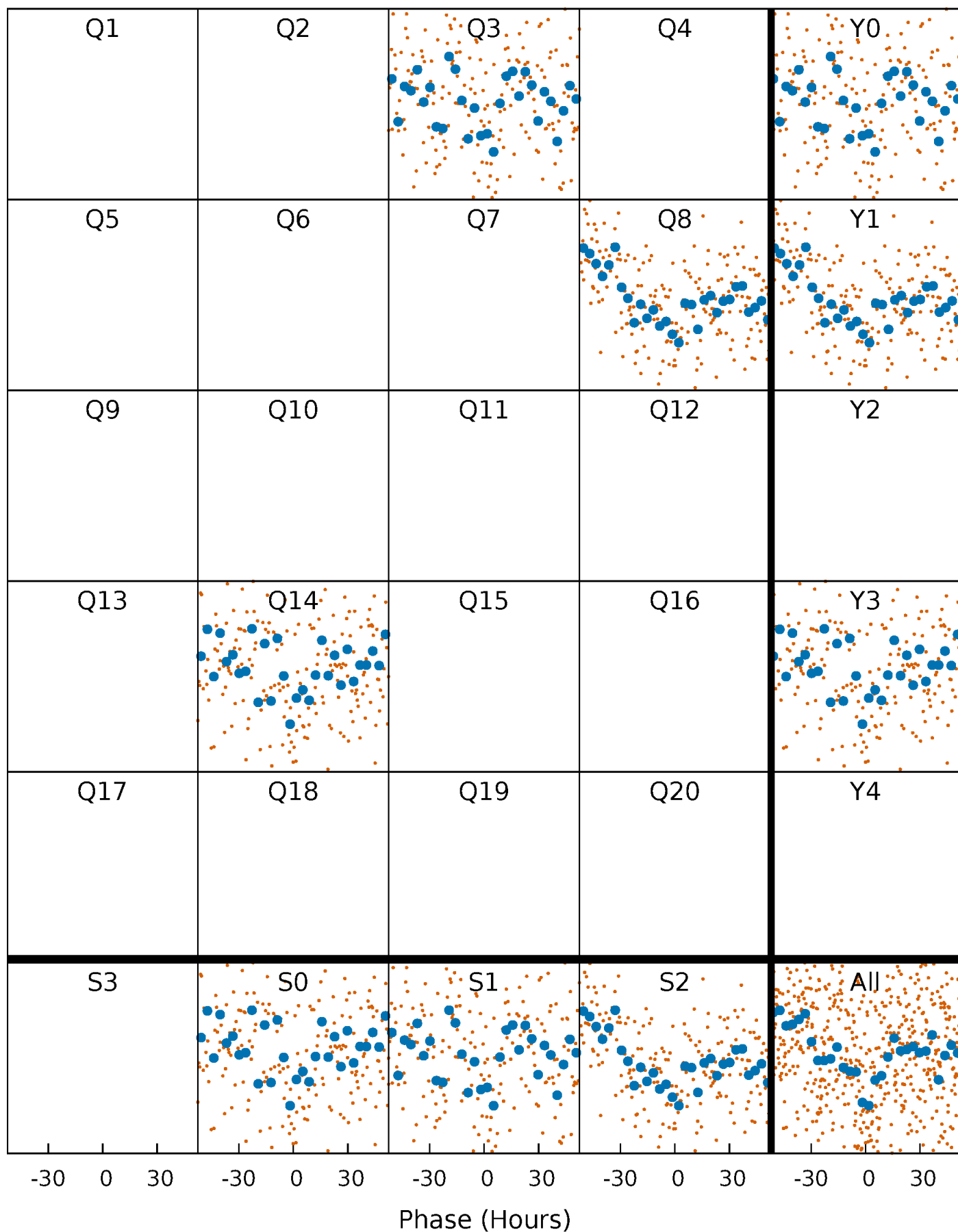


Non-Whitened Vs. Whitened Light Curve



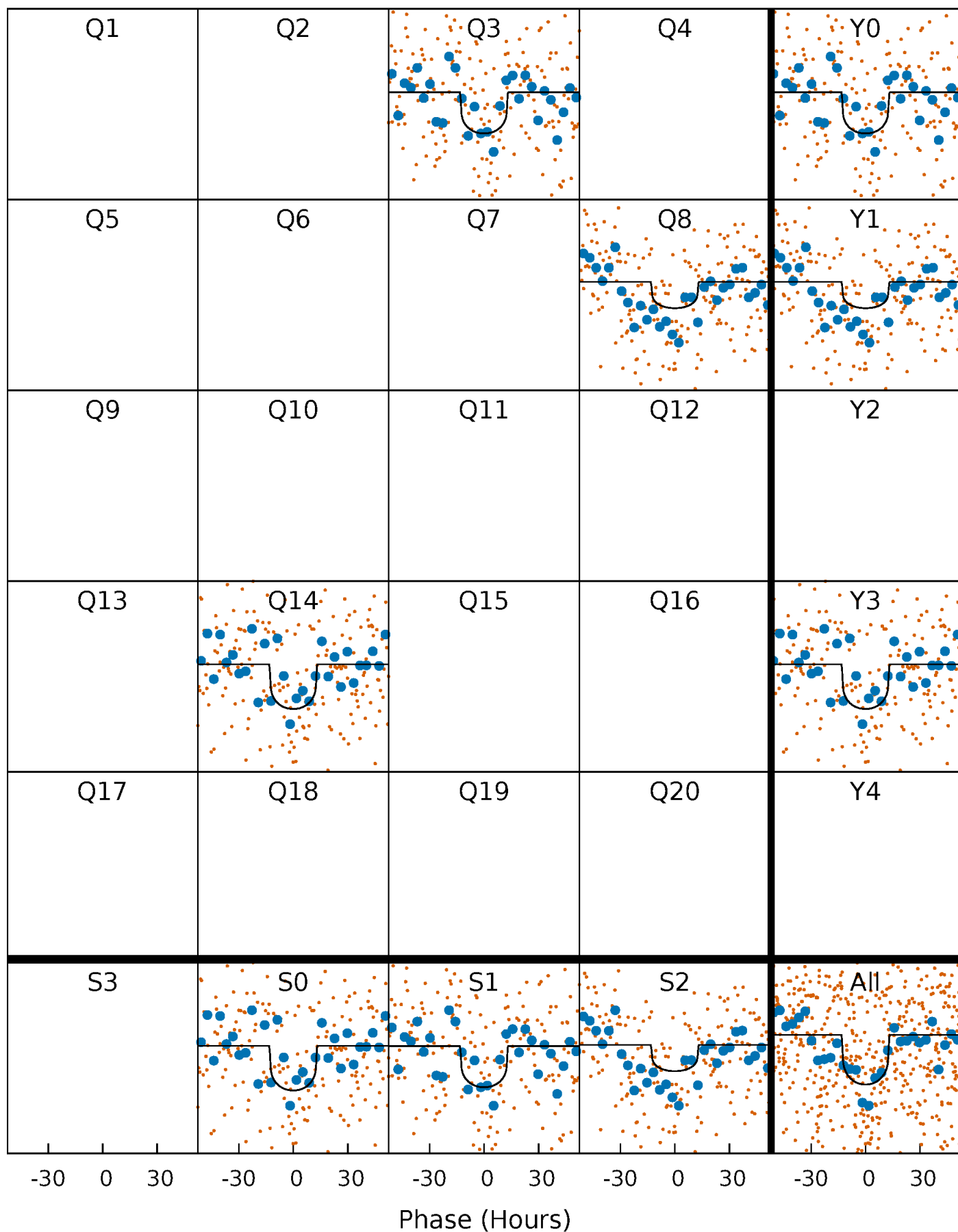
PDC Quarter-Phased Transit Curves

TCE 006443199-01 P=532.418719 Days $T_0=264.843936$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006443199-01 P=532.418719 Days $T_0=264.843936$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

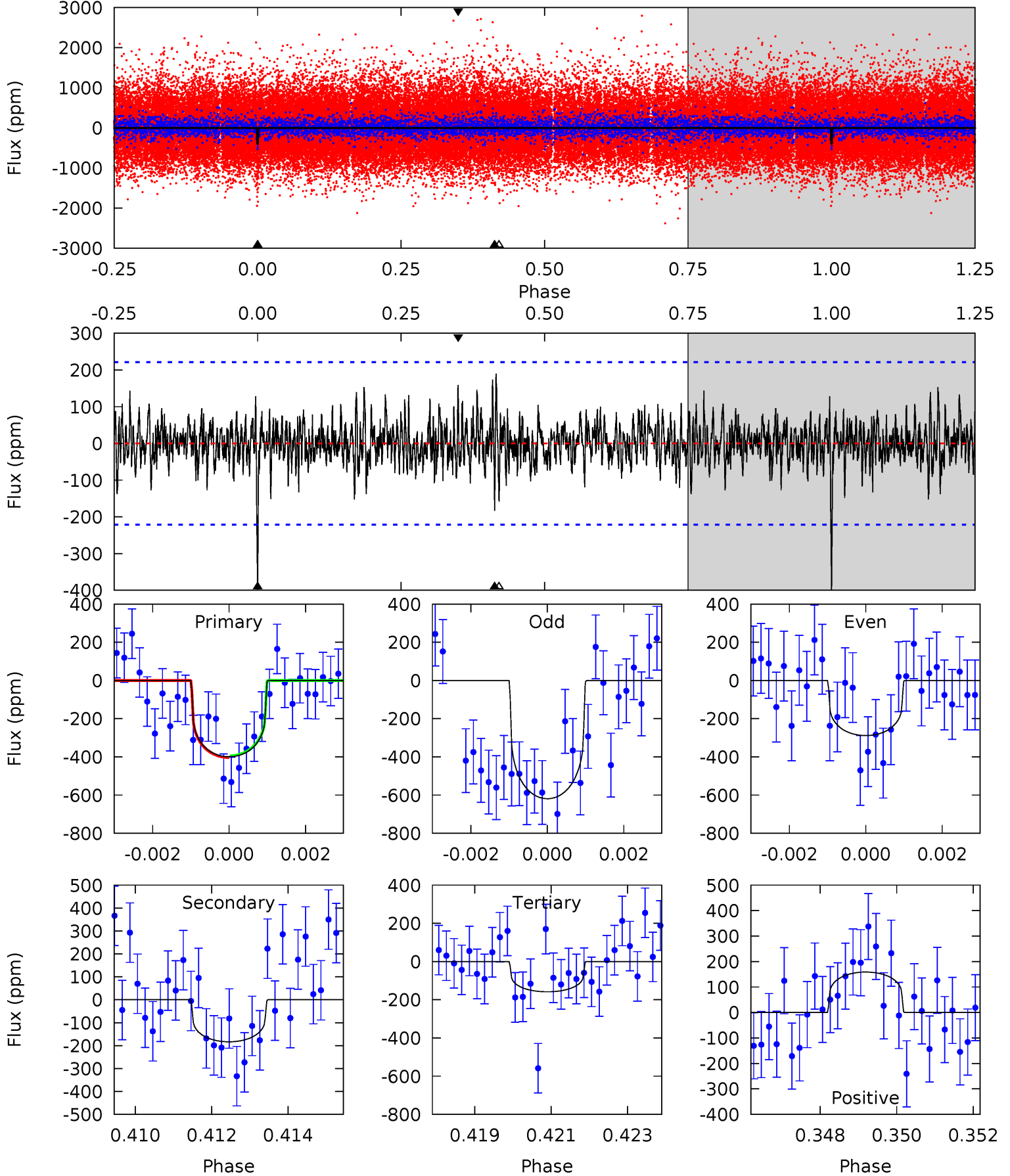
TCE 006443199-01 P=532.478140 Days $T_0=264.791738$ (BKJD)



DV Model-Shift Uniqueness Test

006443199-01, P = 532.418719 Days, E = 264.843936 Days

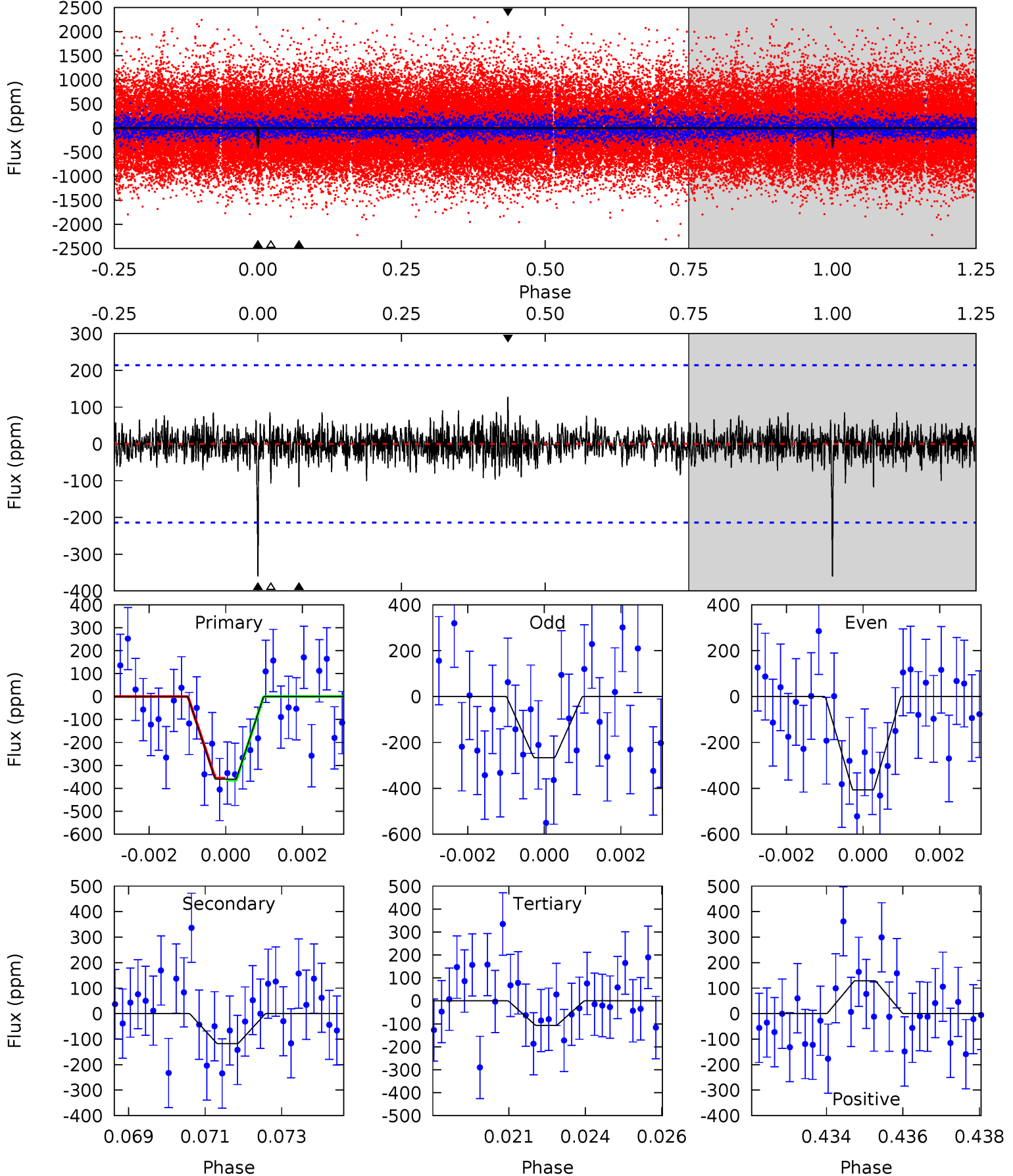
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.59	4.41	3.80	3.81	5.32	3.08	1.11	5.79	5.78	0.60	0.59	3.78	1.21	0.32	0.11



Alt Model-Shift Uniqueness Test

006443199-01, P = 532.478140 Days, E = 264.791738 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.94	2.92	2.65	3.19	5.31	3.07	0.73	6.28	5.74	0.26	-0.27	1.65	1.11	0.26	0.11



Stellar Parameters For KIC 006443199

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5706^{+154}_{-188}	$4.525^{+0.038}_{-0.212}$	$0.210^{+0.200}_{-0.300}$	$0.926^{+0.281}_{-0.088}$	$1.048^{+0.100}_{-0.133}$	$1.856^{+0.369}_{-1.001}$
	+3%/-3%	+1%/-5%	+95%/-143%	+30%/-10%	+10%/-13%	+20%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006443199-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-183 ± 42	$2.01^{+1.51}_{-1.13}$	304^{+21}_{-14}	4872^{+2465}_{-923}	$42052^{+173649}_{-29454}$
Alt.	-118 ± 40	$2.27^{+1.44}_{-1.27}$	305^{+22}_{-15}	4264^{+1702}_{-706}	19389^{+87619}_{-12503}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

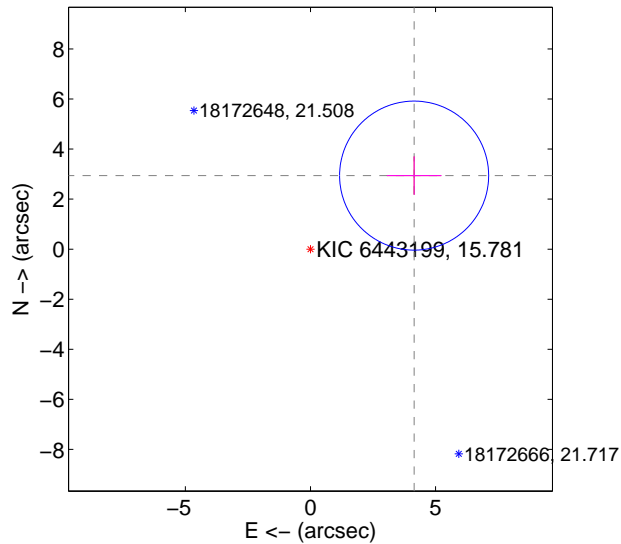
Supplemental centroid analysis for 006443199-01. Kepler magnitude: 15.78. Transit SNR 7.28

There are 0 quarters with good PRF difference image offsets

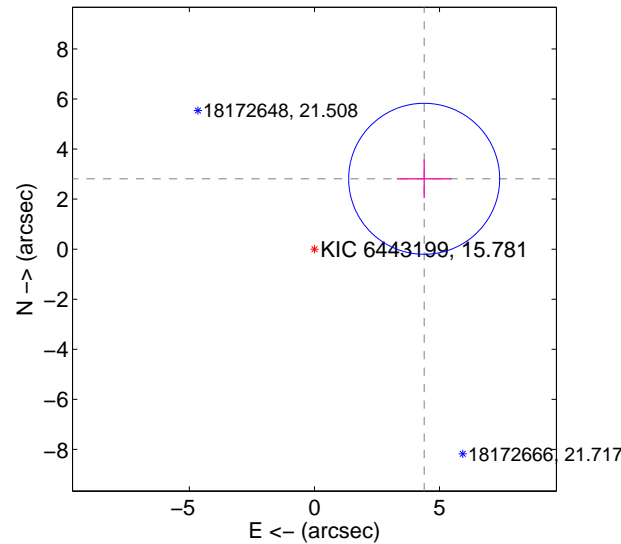
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.078 ± 0.992	5.12	-4.141 ± 1.088	2.939 ± 0.768
PRF-fit source offset from KIC position	5.208 ± 1.005	5.18	-4.384 ± 1.088	2.812 ± 0.768
photometric centroid source offset	2.00 ± 1.72	1.17	-0.31 ± 2.00	1.98 ± 1.71

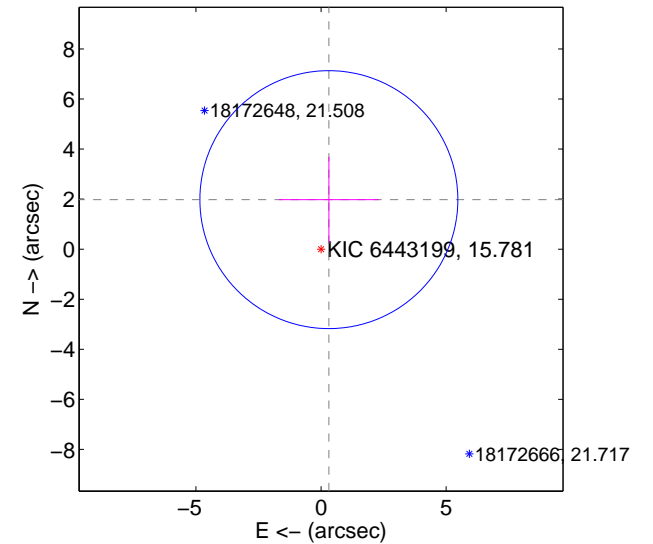
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q1 no difference image



Q1 no OOT image



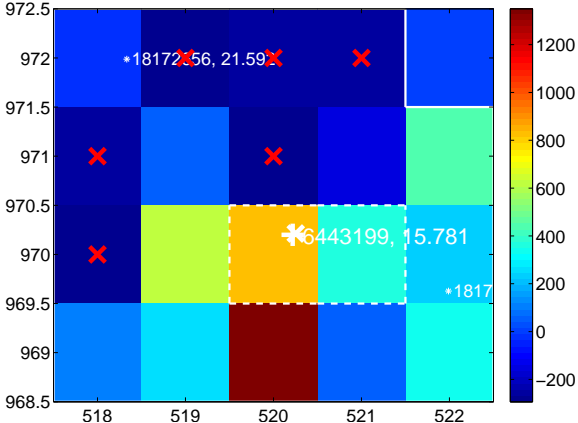
Q2 no difference image



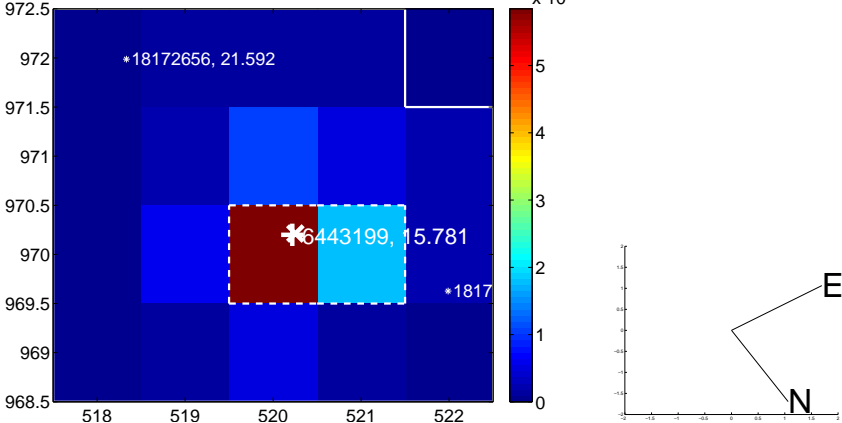
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



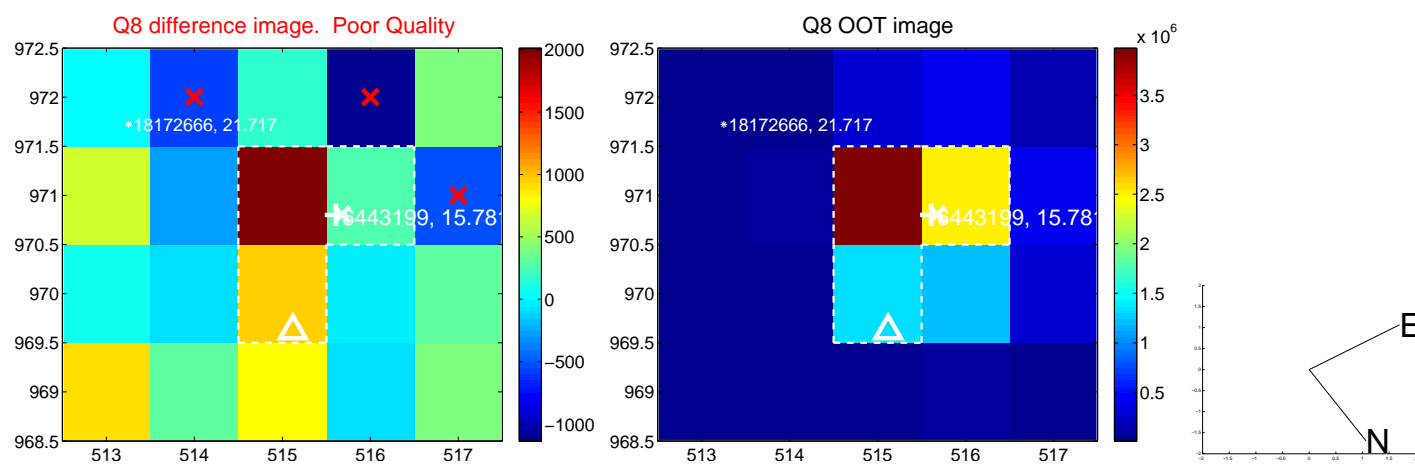
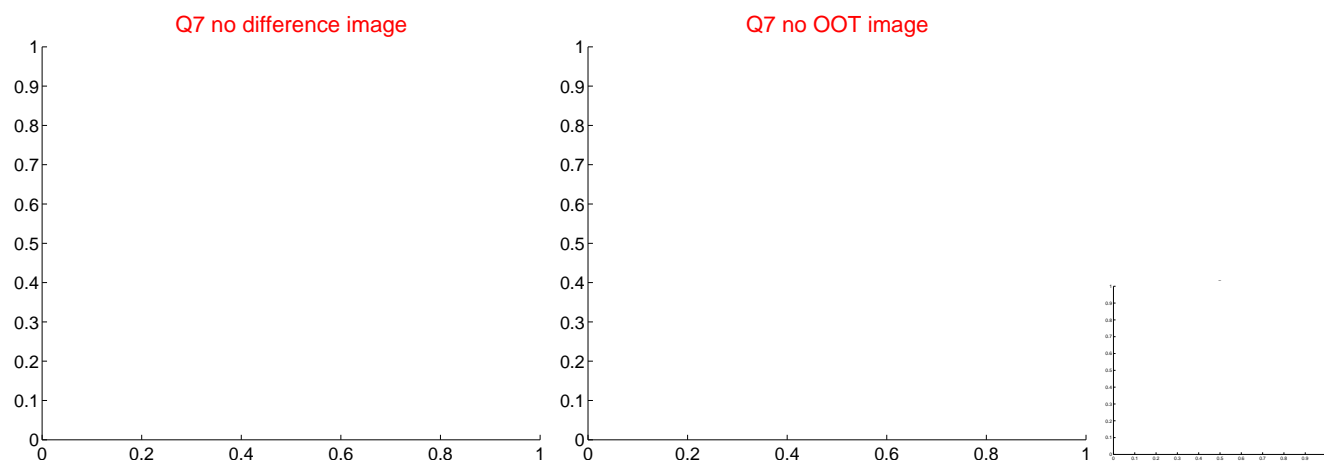
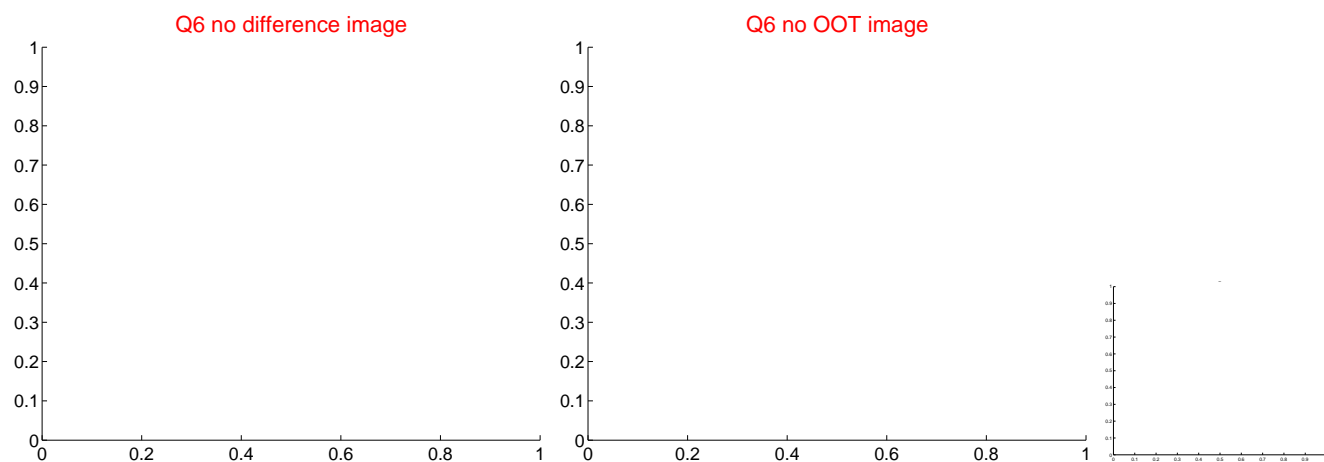
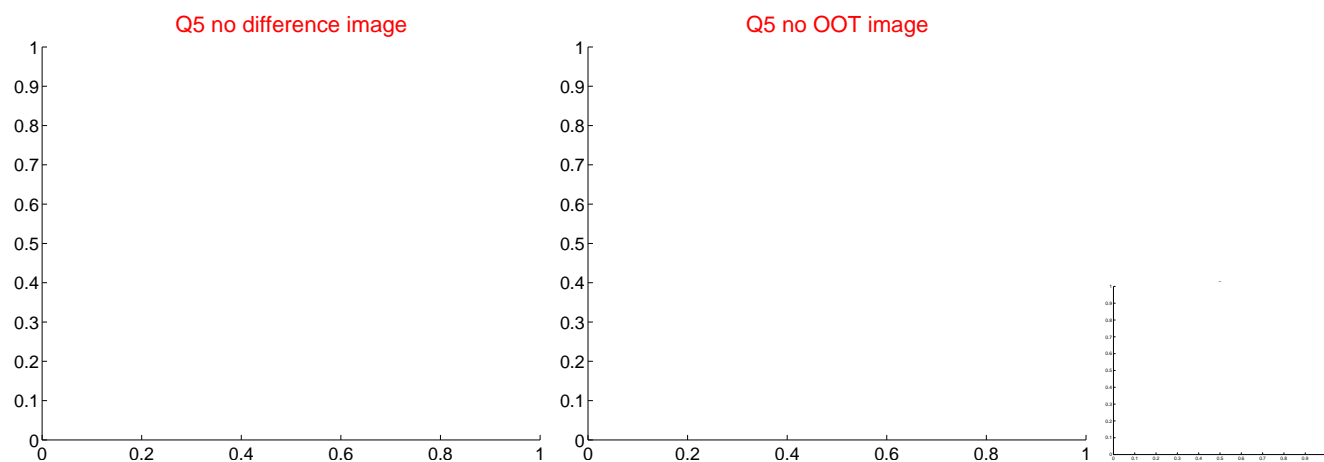
Q4 no difference image



Q4 no OOT image



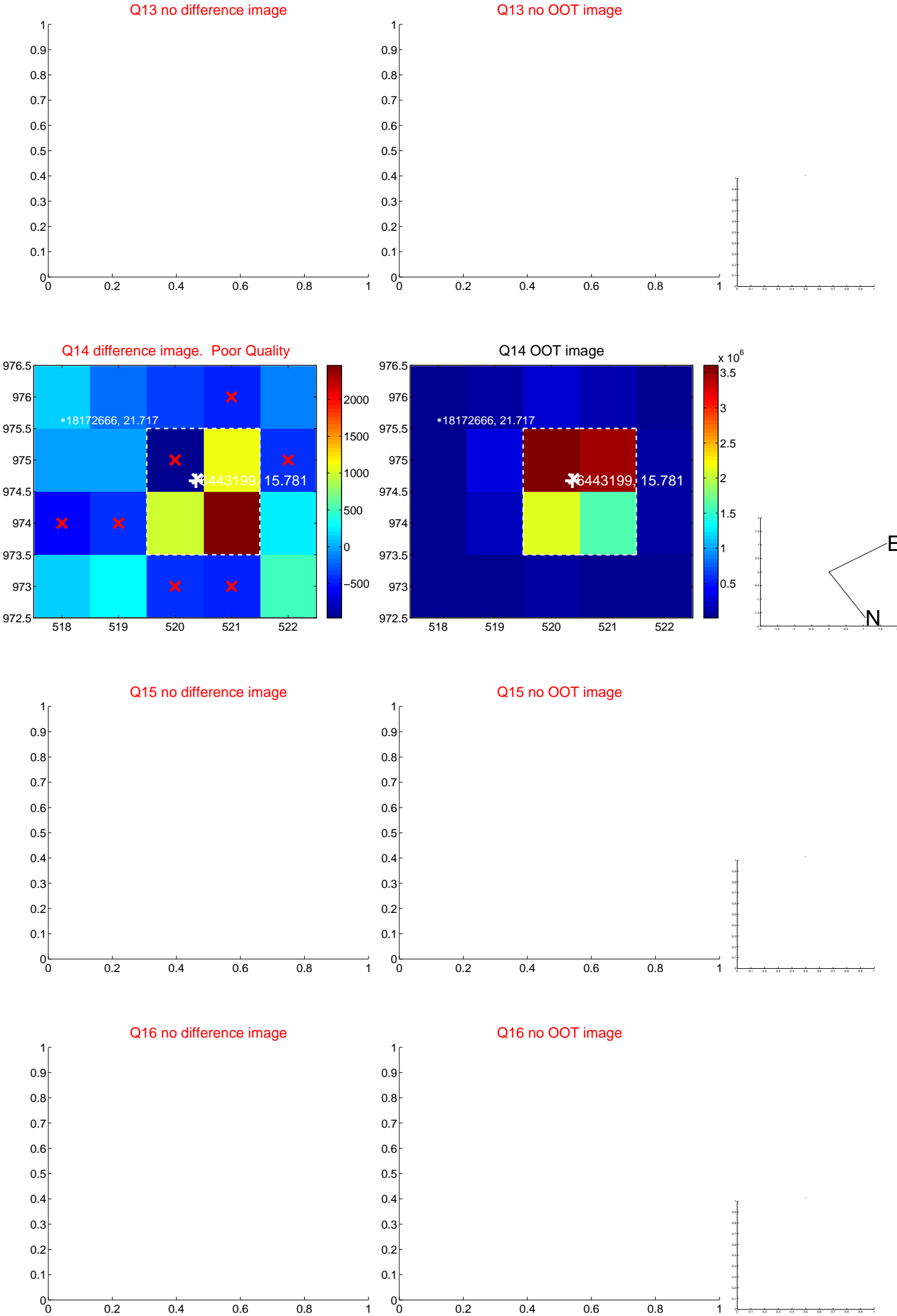
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



Q14 difference image. Poor Quality

*18172666, 21.717

*6443199, 15.781

Q14 OOT image

*18172666, 21.717

*6443199, 15.781

E

N

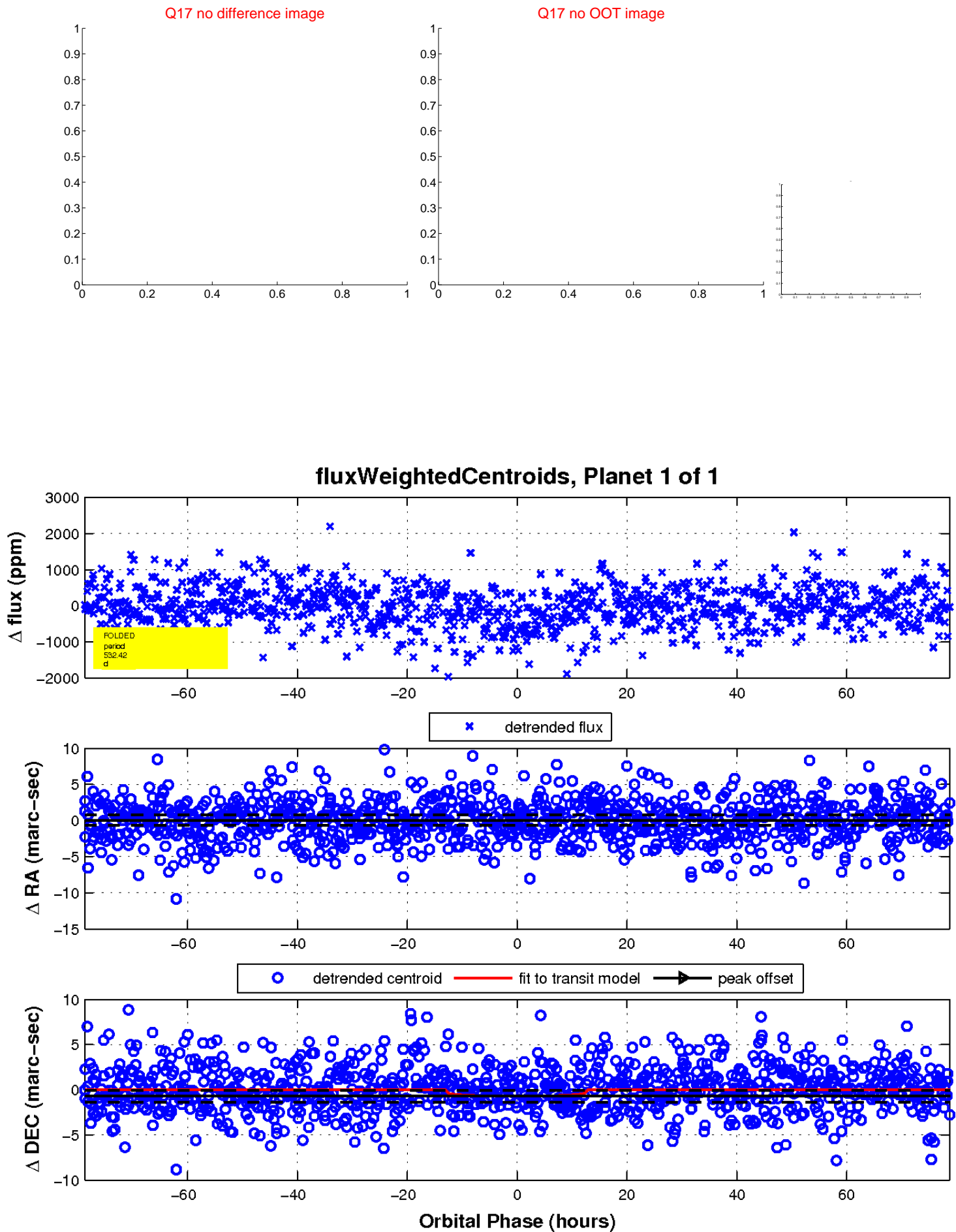
Q15 no difference image

Q15 no OOT image

Q16 no difference image

Q16 no OOT image

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

